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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,205	12/07/2001	Philip P. Carvey	2390.1006-009	9706

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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,205	CARVEY ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,9,10,7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the Amendments to the claims filed on 09/12/2006, the Office has reconsidered the Applicant's request.

- Claims 1, 3, 5, and 7 have been amended.
- Claims 11 and 13 have been cancelled, without prejudice.
- Claims 1, 3, 5, 7, 9, and 10 are still pending for further examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 5, 7, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6363077 B1) in view of Amadon et al. (US 7020147 B1).

Regarding claim 1, Wong et al. disclose the limitation of a network router (Fig. 1, element 10, packet switch as network router; column 4, lines 16 – 20) comprising: a plurality of trunk ports, including a composite port of plural ports to plurality trunks which serve as a composite trunk to a common destination (recited "a plurality of trunked links are formed by aggregating sets of four of the network links" as a plurality of trunk ports, including a composite port of plural ports to plurality trunks; column 4, lines 25 – 37); a

routing fabric for transfer of data packets between trunk ports (recited "switching fabric" as routing fabric; Fig. 2, element 10 switch fabric, column 6, lines 35 – 62) and an output port selector (recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A) which selects an output port for a packet from a composite port, the output port selector balancing load across the trunks of a composite trunk according to adjustable weighting (recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A" selects an output port for a packet from a composite port, the output port selector balancing load across the trunks of a composite trunk according to adjustable weighting; Fig. 2, element 168, column 6, 35 – 67; column 8, lines 20 – 24; also recited "the loading of each of the network links of each of the trunked links is proportional to the number of packets transmitted to the particular link, and is determined in accordance with the type of load balancing scheme" as adjustable weighting; column 5, lines 54 – 57). However, Wong et al. do not disclose explicitly dynamically adjustable weighting. Amadon et al. disclose explicitly the limitation of dynamically adjustable weighting (recited "the dynamic load balancer adjusts the home potentials" as dynamically adjustable weighting; column 2, lines 57 – 66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include dynamically adjustable weighting such as that taught by Amadon et al. in order to provide data communication systems and, in particular, to network control of data communication systems (as suggested by Amadon et al., see column 1, lines 16 – 18).

Regarding claim 3, Wong et al. disclose the limitation of a network router (Fig. 1, element 10, packet switch as network router; column 4, lines 16 – 20) comprising: a plurality of trunk ports, including a composite port of plural ports to plural trunks which serve as a composite trunk to a common destination (recited "a plurality of trunked links are formed by aggregating sets of four of the network links" as a plurality of trunk ports, including a composite port of plural ports to plurality trunks; column 4, lines 25 – 37); a routing fabric for transfer of data packets between trunk ports (recited "switching fabric" as routing fabric; Fig. 2, element 10 switch fabric, column 6, lines 35 – 62); and an output port selector (recited "Fig. 2, element 168, load balanced trunked link port mapping system" as an output port selector) which selects an output port for a packet from a composite port according to a table, the table routes being adjustable (recited "packet routing table" as table; column 8, lines 47 – 49, column 11, lines 29 – 45; recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A" selects an output port for a packet from a composite port according to a table, the table routes being adjustable; Fig. 2, element 168, column 6, 35 – 67; column 8, lines 20 – 24). Wong et al. disclose implicitly wherein the table is dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" as the table is dynamically adjustable to balance load across the trunks of a composite trunk; column 6, lines 20 – 26). Wong et al. do not disclose explicitly the table routes being dynamically adjustable. Amadon et al. disclose explicitly the limitation of the table routes being dynamically adjustable (recited "the dynamic load balancer adjusts the routing tables of the routing table" as the table routes

being dynamically adjustable; column 6, lines 44 – 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include the table routes being dynamically adjustable such as that taught by Amadon et al. in order to provide data communication systems and, in particular, to network control of data communication systems (as suggested by Amadon et al., see column 1, lines 16 – 18).

Regarding claim 5, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16) comprising: identifying a destination of the packets (recited "the packet having a source value and a destination address value indicating a destination node" as identifying a destination of the packets; column 2, lines 27 – 29); selecting one of plurality trunks forming a composite trunk to the destination, the trunk being selected with adjustable weighting to balance load across the trunk of a composite trunk; forwarding the packets toward the destination on the selected trunk (recited "a third packet is received from the high speed server at port B_4, the packet routing unit generates a destination port ID value indicating trunked port P_6 as the destination trunked port associated with the third packet, and the load balancing unit selects a destination port from ports $D_4 – D_7$ of the trunked destination port P6" as selecting one of plurality trunks forming a composite trunk to the destination, the trunk being selected with adjustable weighting to balance load across the trunk of a composite trunk; column 5, lines 41 – 51; also recited "the

loading of each of the network links of each of the trunked links is proportional to the number of packets transmitted to the particular link, and is determined in accordance with the type of load balancing scheme" as adjustable weighting; column 5, lines 54 – 57; column 6, lines 20 – 26). Wong et al. also disclose implicitly dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" as dynamically adjustable to balance load across the trunks of a composite trunk; column 6, lines 20 – 26). However, Wong et al. do not disclose explicitly dynamically adjustable weighting to balance load across the trunks of a composite trunk. Amadon et al. disclose explicitly the limitation of dynamically adjustable weighting to balance load across the trunks of a composite trunk (recited "the dynamic load balancer adjusts the home potentials" as dynamically adjustable weighting to balance load across the trunks of a composite trunk; column 2, lines 57 – 66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include dynamically adjustable weighting to balance load across the trunks of a composite trunk such as that taught by Amadon et al. in order to provide data communication systems and, in particular, to network control of data communication systems (as suggested by Amadon et al., see column 1, lines 16 – 18).

Regarding claim 7, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16) comprising: identifying a destination of the packets (recited "the packet having a source

value and a destination address value indicating a destination node" as identifying a destination of the packets; column 2, lines 27 – 29); selecting one of plural trunks forming a composite trunk to the destination, the trunk being selected according to a table, the table routes being adjustable; and forwarding the packets toward the destination on the selected trunk (recited "packet routing table" as table; column 8, lines 47 – 49, column 11, lines 29 – 45, recited "a third packet is received from the high speed server at port B_4, the packet routing unit generates a destination port ID value indicating trunked port P_6 as the destination trunked port associated with the third packet, and the load balancing unit selects a destination port from ports $D_4 – D_7$ of the trunked destination port P_6" as selecting one of plurality trunks forming a composite trunk to the destination; the trunk being selected according to a table, the table routes being adjustable; and forwarding the packets toward the destination on the selected trunk. Wong et al. disclose implicitly wherein the table is dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" as the table is dynamically adjustable to balance load across the trunks of a composite trunk; column 6, lines 20 – 26). Wong et al. do not disclose explicitly the table routes being dynamically adjustable. Amadon et al. disclose explicitly the limitation of the table routes being dynamically adjustable (recited "the dynamic load balancer adjusts the routing tables of the routing table" as the table routes being dynamically adjustable; column 6, lines 44 – 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include the table routes being dynamically adjustable such as that taught by Amadon et

al. in order to provide data communication systems and, in particular, to network control of data communication systems (as suggested by Amadon et al., see column 1, lines 16 – 18).

Regarding claim 9, Wong et al. disclose the limitation of a method as claimed in claimed wherein the destination of the packets is identified from a final destination identifier included in the packet (recited "reads the destination address included in the header information of the data packet received via the network ports to determine a destination port of the packet" as destination of the packets is identified from a final destination identifier included in the packet; column 9, lines 22 – 24, 38 – 46).

Regarding claim 10, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16), Wong et al. also teach network is Ethernet and route packet through Ethernet. However, Wong et al. do not disclose explicitly the limitation of a method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol. Amadon et al. disclose the limitation of a method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol (recited "plurality of network routers based on Internet protocol" as wherein the network is the Internet and the packets are routed under an Internet protocol; column 1, lines 31 – 40, column 21, lines 25 – 30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include a method as claimed wherein the

network is the Internet and the packets are routed under an Internet protocol such as that taught by such as that taught by Amadon et al. in order to provide data communication systems and, in particular, to network control of data communication systems (as suggested by Amadon et al., see column 1, lines 16 – 18).

Response to Arguments

4. Applicant's arguments filed on 09/12/2006 with respect to claims 1, 3, 5, 7, 9, 10, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

Nov 16, 2006

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